

STATE OF WASHINGTON
DEPARTMENT OF FISH & WILDLIFE
LANDS AND RESTORATION SERVICES PROGRAM
Salmonid Screening, Habitat Enhancement &
Restoration Division (SSHEAR)

OFF-CHANNEL SITE INVENTORY DATA

General Information:

Region: North Coast	Observer(s): Powell
River System: Sol Duc	Date: 11/18/97, 4/26/98, 4/5/01
Site Identifier: S-0354	WRIA: 20.0354
River Mile Location: 54.5 (WRIA catalog)	RB/LB: LB
Local Name: South Fork Sol Duc	Trib. to: Sol Duc (20.0096)
Legal Description: NE¼ Sec 2 T29N R10W	County: Clallam
Habitat Type: Valley wall tributary	
Landowner: (X) Federal () State () County () Other Government () Private - National Forest	

Directions to site:

Starting at Forks (Tillicum Park) drive north on Highway 101 for 24.4 miles (mp 216) to F.S. 2918 and take a right on this road. Follow this road for 4.2 miles, to the second bridge crossing. This bridge crosses the South Fork Sol Duc River. The FS 2918 road does parallel the South Fork Sol Duc River to approximately RM 6. Access information for various reaches of the river may be provided by the USFS, Sol Duc Ranger District.

Site Overview:

The South Fork Sol Duc River is major upper watershed tributary to the Sol Duc River. The entire channel length flows through commercial timber property, almost exclusively USFS. Many areas have been impacted by past intense timber harvest activities, primarily in the upper watershed. Associated slides and failures have been attributed to road maintenance problems. Over the course of the years, this river has had various migration blockages. Presently, there is a bedrock fall that is considered an anadromous impasse at about river mile 4.7. A number of in-stream projects have been conducted by the USFS and the Quileute Tribe to improve habitat in this impacted river. Some information for this document has been obtained from the Quileute Fisheries Department, Stream Enhancement, South Fork Sol Duc River report (1984 by Scott Chitwood). Survey notes from a 1992 USFS survey on the South Fork Sol Duc River, and the 1995 Sol Duc Watershed Analysis report. Due to channel complexity, this river has been broken into three reaches for descriptive characteristics.

Reach one is from the mouth to the location of the old Donahue stringer bridge crossing (FS 2920 Road), approximately river mile 1.5. This lower reach typically has the largest concentration of spawning activity (redds per mile) in the lower 0.3 miles. The channel has numerous boulders with areas of good gravel accumulation. There is one large tributary (Tom Creek, RM 0.3) within this reach that offers limited habitat due to barrier constraints. Upstream, the river flows through an incised bedrock canyon. The section between the old bridge site and the canyon is characterized as a boulder-strewn channel with pockets of spawning gravel. Overall, the gradient averages about 3%. The riparian is a mixture of primarily alder and some conifer with overhanging brush on the banks. Pools are formed by old large woody debris, boulders and bedrock.

Reach two is from the old bridge crossing to the bedrock cascade at approximately river mile 4.7. This reach contains the various habitat projects constructed by the USFS and Quileute Tribe. Upstream of the old bridge site, the USFS constructed an overwinter pond (S-354L-01). Presently, the pond is in need of modification due to low flow constraints. This second reach was documented as lacking adequate spawning gravels. A number of log sills and rock berms were installed in the river channel in 1984 and 1985. The intent was to capture gravel for spawning. To date, only a few of these structures are intact. They are functioning as intended, with large gravel accumulations behind them. There is also a series of bead pools that were blasted on a right bank side channel at approximately river mile three. During this survey, it was not functioning due to a variety of problems, but it could offer some high water refuge. It is obvious that strong river flows have had large impacts on these well-intended projects. Off-channel refuge in this upper reach is primarily a few side channels. There are two areas with small spring channels but they are short in length. The associated tributaries are high gradient. The substrate varies in quality and quantity of gravels. The best spawning areas are associated with the enhancement projects. Boulders and old woody debris form pools and cover. The riparian area is a mixture of alder and conifer. The gradient is approximately 3%. The bedrock falls at river mile 4.7 had been manipulated by the USFS for fish passage. The modification project was considered unsuccessful.

Reach three is upstream of the bedrock falls and was not surveyed for this inventory. Information for this reach has been obtained from various documents (see comments section). It is reported that fish habitat extends to river mile 7.6. The 1992 USFS survey documented cutthroat to river mile 6.9. The lower area of this reach was reported to have a gradient of 2.5 - 3% and the upper area was 4%. The river channel was reported rocky with a prominent boulder, cobble and bedrock substrate. This upper channel had the most impact from past logging operations. Older photos showed little to no riparian in those areas. This stretch apparently has primarily an alder riparian and lacks large woody debris.

Habitat Information:

Water source: Tributaries, runoff, springs

Intermittent/year-around:

- Year-around

Estimated flows (cfs): 10 +

Water temperatures: 5° C

Adjacent stream temperature: 5° C

Other water observations:

Site area measurements: ☐ Indirect ☐ Direct ☒ Combination

Widths: Channel- 2 m - 10 m (ww) Ponds- NA Wetlands- NA

Depths: Channel- variable Ponds- NA Wetlands- NA

Total length surveyed: ~4. 7 miles to an anadromous barrier. The channel length was not hip-chained. Length is approximated from maps and other resource materials. Fish habitat has been documented to river mile 7.6 miles. Landmark mileage points tend to conflict amongst documents.

Total existing habitat area (est.): 45,800 m² (measured for this survey)

Spawning Habitat conditions: ☐ None ☐ Poor ☒ Fair ☐ Good ☐ Excellent

Describe spawning habitat:

- Higher concentration of spawning habitat is in the lower 0.3 miles of the river.
- Gravel accumulation is typically associated with boulders and wood.
- The upper reach had numerous wood and rock placement projects for gravel capture. Only a few of these structures are still intact and they are accumulating gravel.
- It has been documented that the limiting factor for this river is spawning gravel.

Rearing habitat conditions: ☐ None ☒ Poor ☐ Fair ☐ Good ☐ Excellent

Describe pond and other rearing habitat:

- Old large woody debris offers cover. Woody debris and boulders form pool habitat.
- There is a constructed off-channel pond in the lower reach but low flows limit access.
- There is some river side channel areas. One was enhanced but has been damaged. It may still function during high flows.
- Small spring channels on the left bank may provide limited high water refuge.
- The riparian area is a mix of alder and conifers.
- Summer rearing has been documented as good.

Describe inaccessible habitat:

- Upstream of the bedrock falls and was not surveyed for this inventory. Information for this reach has been obtained from various documents (see comments section).
- It is reported that fish habitat extends to river mile 7.6. The 1992 USFS survey documented cutthroat to river mile 6.9.
- The lower area of this reach was reported to have a gradient of 2.5 - 3% and the upper area was 4%. The river channel was reported rocky with a prominent boulder, cobble and bedrock substrate. This upper channel had the most impact from past logging operations. Older photos showed little to no riparian in those areas. This stretch apparently has primarily an alder riparian and lacks large woody debris.

Describe wetland: ☐ Bog ☐ Marsh ☐ Scrub-shrub Wetland ☐ Forested Wetland

- N/A

Flooding potential: ☐ Low ☐ Medium ☒ High

- This river experience flushing flows in the winter.

Fish Information:

Site entry condition to (Sol Duc River 20.0096): ☐ Poor ☐ Fair ☒ Good

- Open egress.

Coho access and use:

- Juvenile- ☐ Unknown ☐ None ☐ Poor ☒ Fair ☐ Good
- Adult- ☐ Unknown ☐ None ☐ Poor ☒ Fair ☐ Good
- Quileute Tribe has a coho spawner index to river mile 0.3. Supplemental surveys are conducted to river mile 4.7.

Other species access and use: ☐ Chum ☐ Pink ☐ Sockeye ☒ Chinook ☒ Trout

- Some chinook spawning has been documented to river mile 0.3.
- Steelhead spawner index surveys by WDFW are conducted to river mile 0.3. Supplemental surveys are conducted to river mile 4.7. Occasionally, the survey is extended above the barrier falls.

Habitat Improvements:

Enhancement opportunities:

- None recommended.

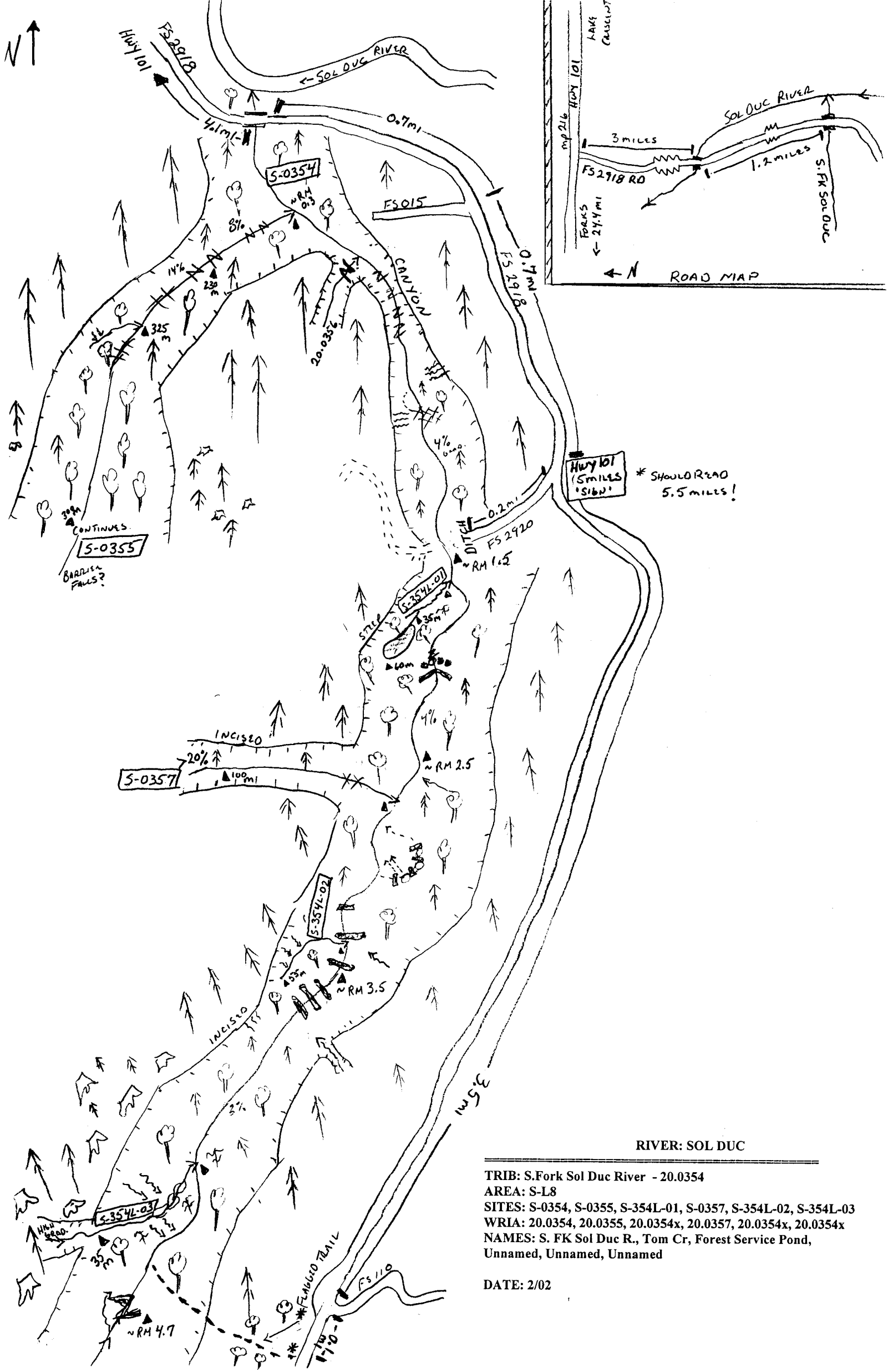
Additional Comments:

- Information sources: Chitwood, Scott. 1984. Stream Enhancement, South Fork Sol Duc River. Quileute Fisheries Department. Also, notes from a 1992 USFS (Sol Duc Ranger District) survey on the South Fork Sol Duc River and the 1995 Sol Duc Watershed Analysis report.

Attachments Available:

Contact respective SSHEAR habitat biologist for the following checked items:

<input checked="" type="checkbox"/> Aerials	<input checked="" type="checkbox"/> Sketch	<input checked="" type="checkbox"/> Maps	<input type="checkbox"/> Culvert Report
<input checked="" type="checkbox"/> Other references	<input type="checkbox"/> Spawning surveys	<input type="checkbox"/> Juvenile trapping	<input type="checkbox"/> Fishway Report



RIVER: SOL DUC

TRIB: S.Fork Sol Duc River - 20.0354
AREA: S-L8
SITES: S-0354, S-0355, S-354L-01, S-0357, S-354L-02, S-354L-03
WRIA: 20.0354, 20.0355, 20.0354x, 20.0357, 20.0354x, 20.0354x
NAMES: S. FK Sol Duc R., Tom Cr, Forest Service Pond,
Unnamed, Unnamed, Unnamed

DATE: 2/02

